

REMARKS/ARGUMENTS

Claims 15-34 are pending in the present application.

In the June 23, 2008 Office Action, the Primary Examiner rejected claims 15-34 under 35 U.S.C. §103(a) as being unpatentable over Fukushima (JP 2002-020576). The Primary Examiner also made the rejections final.

Applicant very appreciates the Primary Examiner's careful review of the present application.

The following remarks herein are considered to be responsive thereto.

Claims 15-21:

Claim 15, as previously presented, recites an olefinic thermoplastic elastomer obtained by melting and kneading ingredients, where the ingredients include:

“**a graft copolymer** composed of an olefin homo/co-polymer segment formed from a nonpolar α -olefin monomer, and a vinyl copolymer segment, wherein the graft copolymer has a polyphase structure in which one of the olefin homo/co-polymer segment and the vinyl copolymer segment form a dispersed phase in the other with a particle size of 0.01 to 1 μ m;

an acrylic rubber formed from a monomer mixture in which **10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate** are contained as main ingredients;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber; and

0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber.” (Emphasis added.)

The combination of the claimed ingredients compounded in the claimed amount can improve at least oil resistance and compression set. Applicant respectfully submits that claim 15 achieves surprising and unexpected results that can not be anticipated from Fukushima.

In the Office Action, the Primary Examiner allegedly asserted on page 3 that “**no data comparative to Fukushima have been presented**”. Applicant respectfully disagreed the Primary Examiner's assertion. As discussed below, data comparative to Fukushima can be found in the specification of the current invention in view of Fukushima.

Please be noted that examples 1 and 5 of Fukushima use acrylonitrile (AN) but examples 2 to 4 and 6 of Fukushima do not use acrylonitrile (AN). See Table 1 and paragraphs [0078] and [0081] of Fukushima. For this reason, examples 1 and 5 of Fukushima will be compared to Examples disclosed in the specification of the current invention in the following discussion.

Tensile Strength

Table 2 of Fukushima indicates that examples 1 and 5 have tensile strength (Pa) of **0.941** and **0.0902**, respectively.

In contrast, Table 3 disclosed in the specification of the current invention indicates that Examples 1 to 9 of the specification of the current invention have tensile strength (MPa) of **6.2, 5.5, 8.0, 7.5, 4.5, 5.5, 5.2, 6.2, and 5.0**, respectively, which are remarkably higher than those of Fukushima. Such an improvement in tensile strength can not be expected from Fukushima.

Oil Resistance

Oil resistance is expressed by degree of swelling (%) in Fukushima. Degree of swelling (%) of Fukushima is calculated in accordance with the following formula:

Degree of swelling (%) = [(weight after immersing - weight before immersing)/weight before immersing] x 100.

This formula is identical to that of weight change(%) of the specification of the current invention. Therefore, degree of swelling (%) of Fukushima and weight change(%) of the specification of the current invention are calculated in the same manner.

Table 2 of Fukushima indicates that examples 1 and 5 have degree of swelling (%) **20** and **19**, respectively.

In contrast, Table 3 disclosed in the specification of the current invention indicates that Examples 1 to 9 of the specification of the current invention have weight change(%) of **12, 14, 15, 10, 0, 4, 2, 0, and 0**, respectively, which are remarkably smaller than those of Fukushima.

In Fukushima, degree of swelling (%) represents oil resistance measured at **100** degree Celsius. In the current invention, weight change (%) represents oil resistance measured at **120** degree Celsius, which is harsh condition compared to that of Fukushima. Considering the harsh condition in the current invention, examples 1 to 9 of the specification of the current invention

have remarkably superior oil resistance compared to Fukushima. Such an improvement in oil resistance can not be expected from Fukushima.

In other words, Fukushima does not teach or suggest the ingredients and amount of each ingredient as recited in claim 15. Based on Fukushima, one ordinary skilled in the art can not expect that the combination of the claimed ingredients compounded in the claimed amounts can improve at least tensile strength and oil resistance. Claim 15 achieves surprising and unexpected results that can not be expected from Fukushima. Therefore claim 15 is patentable over Fukushima.

Therefore, for at least the foregoing reasons, claim 15 is patentable under 35 U.S.C. §103(a) over Fukushima.

Accordingly, claims 16-21, which depend from now allowable claim 15, are patentable at least for this reason.

Claims 22-30:

Claim 22, as previously presented, recites an olefinic thermoplastic elastomer obtained by melting and kneading ingredients, where the ingredients include:

“**a grafting precursor** composed of particles of an olefin homo/co-polymer formed from a nonpolar α -olefin monomer, and a copolymer of a vinyl monomer and a radically polymerizable organic peroxide, the copolymer being dispersed in the particles;

an acrylic rubber formed from a monomer mixture in which **10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate** are contained as main components;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber; and

0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber.” (Emphasis added.)

Referring to and incorporating herewith the reasons why claim 15 is patentable under 35 U.S.C. §103(a) over Fukushima, claim 22 is also patentable under 35 U.S.C. §103(a) over Fukushima.

Accordingly, claims 23-30, which depend from now allowable claim 22, are patentable at least for this reason.

Claims 31 and 32:

Claim 31, as previously presented, recites a molding obtained by molding an olefinic thermoplastic elastomer obtained by melting and kneading ingredients, where the ingredients include:

“**a graft copolymer** composed of an olefin homo/co-polymer segment formed from a nonpolar α -olefin monomer, and a vinyl copolymer segment, wherein the graft copolymer has a polyphase structure in which one of the olefin homo/co-polymer segment and the vinyl copolymer segment form a dispersed phase in the other with a particle size of 0.01 to 1 μm ;

an acrylic rubber formed from a monomer mixture in which **10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate** are contained as main ingredients;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber; and

0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the graft copolymer and the acrylic rubber.” (Emphasis added.)

Referring to and incorporating herewith the reasons why claim 15 is patentable under 35 U.S.C. §103(a) over Fukushima, claim 31 is patentable under 35 U.S.C. §103(a) over Fukushima, as well.

Accordingly, claim 32, which depends from now allowable claim 31, is patentable at least for this reason.

Claims 33 and 34:

Claim 33, as previously presented, recites a molding obtained by molding an olefinic thermoplastic elastomer obtained by melting and kneading ingredients, where the ingredients include:

“*a grafting precursor* composed of particles of an olefin homo/co-polymer formed from a nonpolar α -olefin monomer, and a copolymer of a vinyl monomer and a radically polymerizable organic peroxide, the copolymer being dispersed in the particles;

an acrylic rubber formed from a monomer mixture in which **10 to 90 wt% of methoxyethyl acrylate, 5 to 85 wt% of alkyl acrylate, 5 to 15 wt% of acrylonitrile, and 0.1 to 10 wt% of allyl methacrylate** are contained as main components;

0.01 to 10 wt% of a crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber;

0.01 to 10 wt% of a co-crosslinking agent with respect to the total amount of the grafting precursor and the acrylic rubber.” (Emphasis added.)

Referring to and incorporating herewith the reasons why claim 15 is patentable under 35 U.S.C. §103(a) over Fukushima, claim 33 is also patentable under 35 U.S.C. §103(a) over Fukushima.

Accordingly, claim 34, which depends from now allowable claim 32, is patentable at least for this reason.

CONCLUSION

Applicant respectfully submits that the foregoing Amendment and Response place this application in condition for allowance. If the Examiner believes that there are any issues that can be resolved by a telephone conference, or that there are any informalities that can be corrected by an Examiner's amendment, please call the undersigned at 404-495-3678.

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Respectfully submitted,
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